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COMPLETE SPECIFICATION

Improvements in Shut-off Valves

We, ZIMMERMANN & JANSEN, G.M.B.H., of Duren/Rhineland, Germany, a Company organised under the Laws of Germany, do hereby declare the invention, for which we pray that a patent may be granted to us, and the method by which it is to be performed, to be particularly described in and by the following statement:—

The invention relates to improvements in shut-off valves of the kind having a tubular shut-off member adapted to be displaceable in the axial direction relatively to a closure member. In known constructional forms of valves of this kind the shut-off member is guided and sealed both internally and externally between the walls forming part of the valve housing so that the through flowing media are conducted exclusively by the inner wall of the housing. This is disadvantageous in many respects, as, for example, the valves must be constructed of considerable cross-section since adequate wall thicknesses must be provided in order to enclose the tubular shut-off member. From the sealing aspect, moreover, it is disadvantageous to seal a circular wall both internally and externally. Furthermore the tubular shut-off members bear on the inner wall for the most part at guide surfaces and slight obstructions caused by impurities are sufficient to increase excessively the forces required for displacement of the shut-off member.

The disadvantages described are obviated in the simplest manner by a construction according to the present invention which comprises a shut-off slide valve for flowing media and having a tubular shut-off member constructed over its entire length as a conductor for the flowing medium, which shut-off member is displaceable axially to engage a fixed closure member, characterised in that the stationary closure member has a dome-shaped cap freely movable thereon in a vertical direction and constituting a valve seating for the displaceable shut-off member.

A longitudinal sectional view of one constructional example of the invention is shown in the accompanying drawing.

In the constructional example shown the valve housing consists of a plurality of parts 1, 2 and 3. Mounted on one of these parts is a stationary closure member 4. A tubular shut-off member 5 is adapted to be displaceable in an axial direction relatively to the said closure member 4, the said tubular member being guided and sealed in the vicinity of its ends by sealing rings 6 or the like. The shut-off member 5 is positively connected, for its axial displacement, directly to actuating means.

The forces exerted in moving a screw spindle mechanism 7 are transmitted mechanically via a lever 8 and two pins situated diametrically opposite one another on the shut-off member 5.

The closure member 4 has a removable dome-shaped cap 26. The cap 26 has a guide portion by means of which it is so mounted in the stationary closure member 4 as to be freely movable thereon in a vertical direction. The closure member 4 is hollow and has openings 27 situated on the side opposite the cap 26. If there is a sudden recoil of the flow medium, for example in a supply pipe, the cap 26 is automatically lifted and bears against the tubular shut-off member 5. The pipe is thereby closed in the recoil direction.

What we claim is:—

1. Shut-off slide valve for flowing media and having a tubular shut-off member constructed over its entire length as a conductor for the flowing medium, which shut-off member is displaceable axially to engage a fixed closure member, characterised in that the stationary closure member has a dome-shaped cap freely movable thereon in a vertical direction and constituting a valve seating for the displaceable shut-off member.

2. Shut-off slide valve according to Claim 1, characterised in that the dome-shaped cap is

arranged on the fixed and rearwardly open part of the closure member.

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1 SHEET *This drawing is a reproduction of the Original on a reduced scale*